

Abstract

The invention relates to an isolated polynucleotide sequence from the genome of *Bacillus stearothermophilus* (*Geobacillus stearothermophilus*) and an amino acid sequence encoded by the polynucleotide sequence, the
5 corresponding amino acid sequence comprising a novel enzyme, *Tirt* (thermostable intron reverse transcriptase), having reverse transcriptase activity and retaining that activity at temperatures of up to about 75°C.